Research Centre on Safety and Durability of Structures and Materials
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GENNESYS

Hybrid CBC layered concept

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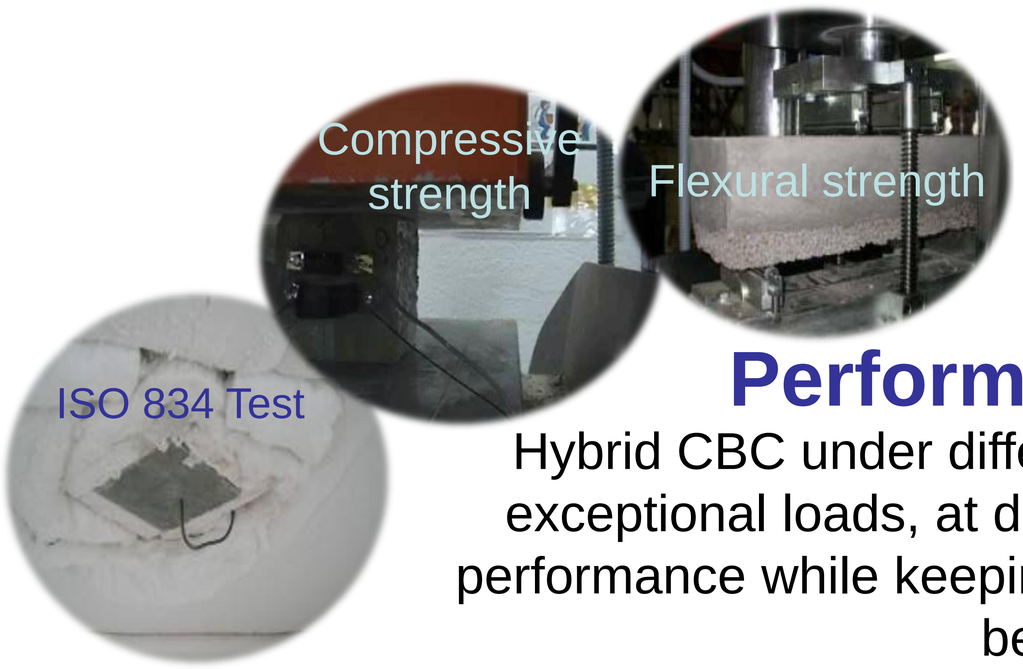
The poster introduces some of the preliminary results in case of a last generation of CBC layered samples prepared according to P200930081 CSIC filed patent. This solution, based on nanotechnology concepts which optimize material properties, is rooted in economic considerations, better working conditions and environmental issues.

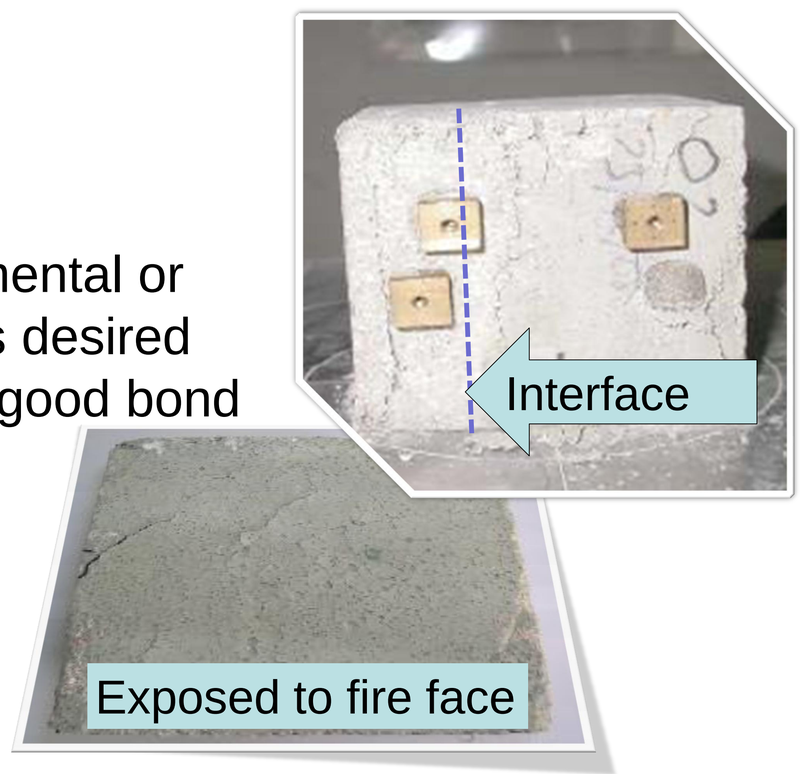
Production process of specimens

Specimens of different size with various layers' thickness were involved to demonstrate the process ability to locally modified material properties, which reply to multipurpose and also contradictory demands affecting large size structural elements.



Performance evaluation

Hybrid CBC under different mechanical, environmental or exceptional loads, at different ages, demonstrates desired performance while keeping integrity of section and good bond between layers..



Conclusions

- The absence of defects of 2D layered elements, helped by the use of nanoparticles or nanograins in the mix compositions, can lead to improve the interface bond and to reduce surface irregularities, simultaneously improves fabrication process and element cost-efficiency.

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